



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/629,399	07/29/2003	Roger A. Allaire	SP03-098	7237
22928	7590	09/22/2004	EXAMINER	
CORNING INCORPORATED			SHAKERI, HADI	
SP-TI-3-1			ART UNIT	PAPER NUMBER
CORNING, NY 14831			3723	

DATE MAILED: 09/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/629,399

Applicant(s)

ALLAIRE ET AL.

Examiner

Hadi Shakeri

Art Unit

3723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-22 is/are rejected.
- 7) ☒ Claim(s) 4 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 121903.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to under 37 CFR 1.84(l). Lines, numbers and letters are not uniformly thick and well defined, clean and durable, and black (poor line quality), Figs. 1-5.
2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “ a pressurized air unit providing a continual flow of air “ must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled “Replacement Sheet” in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

3. Claims 5-10 objected to because of the following informalities:

Art Unit: 3723

the use of an air bearing motor is objected to for creating unnecessary ambiguity, Applicant may wish to change it with, --a driving motor--. Appropriate correction is required.

Further configured for rotation with zero frictional resistance is also improper, Applicant may wish to amend by reciting, --substantially zero resistance--.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 14-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Claim 14 recites the limitation "the predetermined amount" in line 11. There is insufficient antecedent basis for this limitation in the claim.

Further regarding claim 14, coupling the grinding wheel such that the wheel "tends" to pivot about the axis is ambiguous. Is Applicant claiming the offset position of the wheel relative to the axis (as shown in Fig. 1), and if so how does that tend to pivot the wheel?

### ***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-3, 5, 8 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Lange et al. (4,493,166).

Art Unit: 3723

Lange et al. discloses all of the limitations of claim 1, i.e., an apparatus comprising an air bearing support member configured to pivot about an axis, and a grinding unit coupled to the air bearing member (Abstract), meeting all the limitations of claims 2, 3, 5 and 8.

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 6, 7, 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lange et al.

Lange et al. meets all of the limitations of the above claims, except for different grits of the grinding wheel, and the applied pressure. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Lange et al. by using the specific grinding wheel and/or pressure applied, to accommodate the work-piece and/or operational parameters.

11. Claims 1, 2, 13 and 14-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Sakurai et al. (4,667,443) or Stock et al. (6,099,385) in view of either Lougher et al. (6,409,580) or Duescher (6,769,969).

Either Sakurai et al. or Stock et al. meets all of the limitations of claims, 1 and 14, except for disclosing an air bearing support member. Air bearing or other type of "gimballing" type support allowing pivotal movement of the shaft coupled to a grinding unit are known in the art as evident by Lougher et al., e.g., col. 7, lines 31-35. It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the invention of either Sakurai et al.

Art Unit: 3723

or Stock et al. by providing a gimballing type connection for the rotary shaft supporting the grinding wheel as taught by Lougher et al. or Duescher to adapt the tool for more freedom of movement, i.e., pivotal movement along the edge.

Regarding claims 13, 15, 18, 19 and 21, prior art (Sakurai/Stock in view of Lougher/Duescher) meets the limitations.

Regarding claims 16, 17, 20 and 22, except for specific force applied and the amount removed, the angular velocity of the wheel, the feed velocity. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Lange et al. by using the specific pressure applied and/or feed velocity, to accommodate the work-piece and/or operational parameters.

**12.** Claims 11, 12 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over prior art as applied to claims 1 and 14 above, and further in view of Clark et al. (6,428,390).

Prior art (Sakurai/Stock in view of Lougher/Duescher) as applied to claims 1 and 14 meets the limitations of the above claims, except for disclosing a suction type conveyor belt to feed the work. Workpiece transfer system comprising conveyors comprising vacuum chuck are known in the art as evident by Clark et al. It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to further modify the modified invention of prior art with workpiece transport means as taught by Clark et al. as an efficient means of transferring and securing the workpiece during the operation. Regarding the coolant, Sakurai et al. discloses cooling the workpiece during operation, as it is well known in the art and modifying Stock et al. with coolant means would be well within the knowledge of one of ordinary skill in the art to enhance the operation.

Art Unit: 3723

***Allowable Subject Matter***

13. Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

14. Prior art made of record and not relied upon are considered pertinent to applicant's disclosure. Shin et al., Hasegawa et al., Bando, and Kozai et al. are cited to show related inventions.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hadi Shakeri whose telephone number is 703-308-6279. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph J. Hail, III can be reached on 703-308-2687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Hadi Shakeri  
Primary Examiner  
Art Unit 3723  
September 20, 2004